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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,871	12/24/2003	Osamu Sagano	02910.000106	9351

5514 7590 03/21/2007  
FITZPATRICK CELLA HARPER & SCINTO  
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NEW YORK, NY 10112

EXAMINER
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DINH, DUC Q

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/743,871

Applicant(s)

SAGANO ET AL.

Examiner

DUC Q. DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/13/04, 02/25/04</u> .                                      | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 2-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 2 recites “wherein the modulated signal has a waveform obtained by increasing a time width of the predetermined voltage amplitude value by one unit time when input data of the modulation means is increased by one unit, and, in the case where the time width of the waveform exceeds an upper limit of a time width capable of being modulated, takes a waveform obtained by increasing the predetermined voltage amplitude value by one unit voltage”.

Although, the specification page 14, lines 9-13 discloses “when the input data is to be increased by one unit as the compensation of the voltage drops, the time slot is first preferentially increased (increased by one unit time), and if the time slot is satisfied, the voltage amplitude value is increased by one unit voltage”, there is no support for the recited limitation.

The examiner examines the application based on best understood of the claimed languages.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (U.S. Patent No. 5,734,361), hereafter Suzuki.

In reference to claim 1, Suzuki discloses in Fig. 8 an image display apparatus comprising:  
image display devices arranged in matrix form, driven via a plurality of row wirings and column wirings, and used for forming an image;

scanning means (202) for sequentially selecting and scanning the row wirings (3072:fig. 4);

modulation means (209) for outputting a modulated signal to be applied to the column wirings (3073. Fig. 4); and

voltage drop compensation means(206, 207, 208 of Fig. 8,) for calculating corrected image data for reducing an influence of voltage drops due to at least resistance components of the row wirings, with respect to image data, col.(10, lines 45-51)

wherein the modulated signal is a pulse-width modulated voltage signal having a plurality of voltage amplitude values, the modulation means output a modulated signal in which a pulse width and/or a voltage amplitude value of the modulated signal are expanded on the basis of the corrected image data (Fig. 11, col. 12 line 58 through col. 13, line 10).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Sarrasin et al. (U.S. Patent No. 5,555,000), hereinafter Sarrasin.

In reference to claim 2, Suzuki does not disclose the modulated signal has a waveform obtained by increasing a time width of the predetermined voltage amplitude value by one unit time when input data of the modulation means is increased by one unit, and, in the case where the time width of the waveform exceeds an upper limit of a time width capable of being modulated, takes a waveform obtained by increasing the predetermined voltage amplitude value by one unit voltage. However, Sarrasin discloses during a row selection time  $T_{sub.L}$  and as a function of the grey level to be displayed, the column signal must assume a first voltage value  $V_a$  for a certain number of time intervals  $\Delta t$  (increasing a unit of time) and then, if need be, during the remaining time intervals, at the most one second voltage value  $V_b$ , which follows on to the first in the sequence of  $N$  voltages i.e. increasing the voltage by one unit (Col. 5, lines 3-18).

It would have been obvious for one of ordinary skill in the art at the time of the invention to learn the teaching of to increasing a unit the voltage and a unit of time for the column signal as taught by of the Sarrasin in the device of Suzuki because it would provide a display system that

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have a combination of the advantages of the consumption of digital circuits and the analog addressing method, while permitting the selection of a large number of grey levels. (col. 3, lines 25-30)

*Allowable Subject Matter*

7. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: non of the cited arts teaches or suggest:.

An image display apparatus according to claim 2, wherein the voltage drop compensation means includes: effective voltage calculating means for converting the image data into an effective voltage value obtainable when modulation is performed on the basis of the image data; compensation value calculating means for calculating a compensation value for reducing an influence of voltage drops due to at least resistance components of the row wirings, with respect to the effective voltage value; operation means for performing an operation on the compensation value and the effective voltage value to calculate a corrected effective voltage value; and conversion means for converting the corrected effective voltage value into the corrected image data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH  
Examiner  
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